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Claims

1. A system for analysing the condition of a machine having a rotating shaft (8) and
a machine body with a measuring point (12); the system comprising a client part
10   connectable to a communications network (18) for communication with a supplier
part computer (20); said client part comprising:

a sensor (10) attachable on or at said measuring point (12) for generating
measurement data dependent on rotation of said shaft;

an analysis apparatus (14) for analysing the condition of the machine on the
15   basis of said measurement data; said analysis apparatus (14) having

at least one input for receiving said measurement data;

a data processing means for processing condition data
dependent on said measurement data; said data processing means
comprising means for performing a plurality of condition monitoring
20   functions (F1, F2,Fn); and

a logger for registering use of at least one of said condition
monitoring functions (F1, F2,Fn)

a communication port (16) coupled to said data processing
means and connectable to said communications network (18) for
25   communication with said supplier part computer (20); wherein

said analysis apparatus is adapted to deliver information
indicative of said registered use on said communication port (16) for
delivery to said supplier part computer (20).

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2. The apparatus according to claim 1, wherein

said logger is adapted to register use of a first condition monitoring
function a first rate; and

5   said logger is adapted to register use a second condition monitoring

function at a second rate.

3. The apparatus according to claim 2, wherein

said second rate is such that use registered at said second rate causes a higher

10   cost per unit of usage than use registered at said first rate.

4. The apparatus according to claim 2, wherein

said second rate is such that use registered at said second rate causes a lower

cost per unit of usage than use registered at said first rate.

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5. The apparatus according to any of the preceding claims, wherein:

said registered use is a parameter indicative of a number of executions of at

least one of said condition monitoring functions (F1, F2,Fn).

20   6. The apparatus according to any of claims 1-4, wherein:

said registered use is a parameter indicative of an extent of time.

7. The apparatus according to any of claims 1 -6, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes

25   one or two or three or more functions selected from the group consisting of:

vibration analysis, temperature analysis, shock pulse measuring, spectrum analysis of

shock pulse measurement data, Fast Fourier Transformation of vibration

measurement data, graphical presentation of condition data on a user interface,

storage of condition data in a writeable information carrier on said machine, storage

30   of condition data in a writeable information carrier in said apparatus, tachometering,

imbalance detection, misalignment detection.

8. The apparatus according to any of claims 1 -6, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a function for imbalance detection.

9. The apparatus according to any of claims 1 -7, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a function for balancing.

10. The apparatus according to any of claims 1 - 7, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a function for misalignment detection.

11. The apparatus according to any of claims 1 - 10, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a function for alignment.

12. An apparatus for analysing the condition of a machine having a rotating shaft (8) and a machine body with a measuring point (12), comprising:

a sensor (10) attachable on or at said measuring point (12) for generating measurement data dependent on rotation of said shaft;

data processing means for processing condition data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2,Fn);

a logger for registering use of at least one of said condition monitoring functions (F1, F2,Fn)

a communication port (16) coupled to said data processing means;

wherein

said analysis apparatus is adapted to deliver information indicative of said registered use on said communication port (16);

5   13. The apparatus according to claim 12, wherein

said logger is adapted to register use of a first condition monitoring function a first rate; and

said logger is adapted to register use a second condition monitoring function at a second rate.

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14. The apparatus according to claim 13, wherein

said second rate is such that use registered at said second rate causes a higher cost per unit of usage than use registered at said first rate.

15   15. The apparatus according to claim 13, wherein

said second rate is such that use registered at said second rate causes a lower cost per unit of usage than use registered at said first rate.

16. The apparatus according to any of the preceding claims, wherein:

20   said registered use is a parameter indicative of a number of executions of at least one of said condition monitoring functions (F1, F2,Fn).

17. The apparatus according to any of the preceding claims, wherein:

said registered use is a parameter indicative of an extent of time.

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18. The apparatus according to any of the preceding claims, further comprising

means for causing a user interface to indicate when use is registered at said first rate.

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19. The apparatus according to any of the preceding claims, further comprising

means for causing a user interface to indicate when use is registered at said second rate.

20. The apparatus according to any of the preceding claims, wherein

said logger is adapted to register use of at least two of said condition monitoring functions (F1, F2,Fn); and

wherein

said logger is adapted to register use of a first condition monitoring function a third rate; and

said logger is adapted to register use a second condition monitoring function at a fourth rate, said fourth rate deviating from said third rate.

21. The apparatus according to claim 20, wherein

said fourth rate is such that use registered at said fourth rate causes a higher cost per unit of usage than use registered at said third rate.

22. The apparatus according to claim 20, wherein

said fourth rate is such that use registered at said fourth rate causes a lower cost per unit of usage than use registered at said third rate.

23. The apparatus according to any of claims 12 -22, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes two or three or more functions selected from the group consisting of: vibration analysis, temperature analysis, shock pulse measuring, spectrum analysis of shock pulse measurement data, Fast Fourier Transformation of vibration measurement data, graphical presentation of condition data on a user interface, storage of condition data in a writeable information carrier on said machine, storage of condition data in a writeable information carrier in said apparatus, tachometering, imbalance detection, misalignment detection.

24. The apparatus according to any of claims 12 -25, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a function for imbalance detection.

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25. The apparatus according to claim 26, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a

function for balancing.

10   26. The apparatus according to any of claims 12 - 27, wherein

said plurality of condition monitoring functions (F1, F2,Fn) includes a

function for misalignment detection.

27. The apparatus according to claim 28, wherein

15   said plurality of condition monitoring functions (F1, F2,Fn) includes a

function for alignment.